



May 16, 2016

Tom Moe USS Corporation P.O. Box 417 Mountain Iron, MN 55768

RE: Project: NPDES-TB Wk1 Pace Project No.: 1265452

#### Dear Tom Moe:

Enclosed are the analytical results for sample(s) received by the laboratory on May 05, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Melisa M Woods

Mazzi Wirds

melisa.woods@pacelabs.com

**Project Manager** 

**Enclosures** 

cc: Cory Hertling Terri Sabetti, NTS





315 Chestnut Street Virginia, MN 55792 (218) 742-1042



#### **CERTIFICATIONS**

Project: NPDES-TB Wk1

Pace Project No.: 1265452

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792 Alaska Certification #MN01084 Arizona Department of Health Certification #AZ0785

Minnesota Dept of Health Certification #: 027-137-445

North Dakota Certification: # R-203

Wisconsin DNR Certification #: 998027470 WA Department of Ecology Lab ID# C1007

Nevada DNR #MN010842015-1

Oklahoma Department of Environmental Quality

**Duluth Minnesota Cerification ID's** 

4730 Oneota St., Duluth, MN 55807

Minnesota Dept of Health Certification #: 027-137-152

Wisconsin DNR Certification #: 999446800

North Dakota Certification #: R-105





#### **SAMPLE SUMMARY**

Project: NPDES-TB Wk1

Pace Project No.: 1265452

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1265452001	SD 001 (Seep 020)	Water	05/05/16 10:45	05/05/16 13:00





#### **SAMPLE ANALYTE COUNT**

Project: NPDES-TB Wk1

Pace Project No.: 1265452

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
1265452001	SD 001 (Seep 020)	EPA 1664 TPH	BT1	1	PASI-DUL
		USGS I-3765	BEM	1	PASI-V
		EPA 300.0	DMB	1	PASI-V

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#### **ANALYTICAL RESULTS**

Project: NPDES-TB Wk1

Pace Project No.: 1265452

Date: 05/16/2016 12:54 PM

Sample: SD 001 (Seep 020)	Lab ID:	1265452001	Collecte	d: 05/05/16	10:45	Received: 05/	05/16 13:00 Ma	trix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical	Method: EPA	1664 TPH						
Total Petroleum Hydrocarbons	ND	mg/L	3.1	0.92	1		05/10/16 16:44		
USGS I-3765 TSS	Analytical	Method: USG	S I-3765						
Total Suspended Solids	1.6	mg/L	1.0	1.0	1		05/10/16 13:08		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0						
Sulfate	1130	mg/L	20.0	10.0	10		05/11/16 07:31	14808-79-8	

Qualifiers



#### **QUALITY CONTROL DATA**

**EPA 1664 TPH** 

1664 SGT-HEM, TPH

Analysis Method:

Analysis Description:

Project: NPDES-TB Wk1

Pace Project No.: 1265452

QC Batch: DUL/6554

QC Batch Method: EPA 1664 TPH

Associated Lab Samples: 1265452001

METHOD BLANK: 315410 Matrix: Water

Associated Lab Samples: 1265452001

Blank Reporting
Parameter Units Result Limit MDL Analyzed

Total Petroleum Hydrocarbons mg/L ND 3.0 0.90 05/10/16 14:35

LABORATORY CONTROL SAMPLE: 315411

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers 82 Total Petroleum Hydrocarbons mg/L 20 16.3 64-132

MATRIX SPIKE SAMPLE: 315412

Date: 05/16/2016 12:54 PM

1265528001 MS MS Spike % Rec Parameter Units Result Conc. Result % Rec Limits Qualifiers <1.1 71 64-132 Total Petroleum Hydrocarbons 23.3 17.4 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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#### **QUALITY CONTROL DATA**

Project: NPDES-TB Wk1

Pace Project No.: 1265452

QC Batch: WET/23931 Analysis Method: USGS I-3765

QC Batch Method: USGS I-3765 Analysis Description: USGS I-3765 Total Suspended Solids

Associated Lab Samples: 1265452001

METHOD BLANK: 315440 Matrix: Water

Associated Lab Samples: 1265452001

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Suspended Solids mg/L ND 1.0 05/10/16 13:07

LABORATORY CONTROL SAMPLE: 315441

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers **Total Suspended Solids** mg/L 239 238 100 80-120

SAMPLE DUPLICATE: 315442

1265411001 Dup Max **RPD RPD** Parameter Units Result Result Qualifiers 412 388 6 10 Total Suspended Solids mg/L

SAMPLE DUPLICATE: 315443

Date: 05/16/2016 12:54 PM

1265412001 Dup Max RPD RPD Parameter Units Result Result Qualifiers 32.0 Total Suspended Solids mg/L 32.0 0 10

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



#### **QUALITY CONTROL DATA**

Project: NPDES-TB Wk1

Pace Project No.: 1265452

Date: 05/16/2016 12:54 PM

QC Batch: WETA/16716 Analysis Method: EPA 300.0 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 1265452001

METHOD BLANK: 315236 Matrix: Water

Associated Lab Samples: 1265452001

Blank Reporting MDL Limit Qualifiers Parameter Units Result Analyzed Sulfate ND 2.0 1.0 05/10/16 21:02

mg/L

LABORATORY CONTROL SAMPLE:

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Sulfate mg/L 50 49.1 98 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 315238 315239

MS MSD 1265372001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Sulfate 50 90-110 0 20 mg/L 118 50 169 169 104 103

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 315240 315241

MS MSD 1265667001 MS MSD MS Spike Spike MSD % Rec Max RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD Qual Sulfate 49.6 50 50 102 102 104 104 90-110 0 20 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



#### **QUALIFIERS**

Project: NPDES-TB Wk1
Pace Project No.: 1265452

#### **DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

**RPD - Relative Percent Difference** 

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

#### **LABORATORIES**

Date: 05/16/2016 12:54 PM

PASI-DUL Pace Analytical Services - Duluth
PASI-V Pace Analytical Services - Virginia

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#### **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: NPDES-TB Wk1

Pace Project No.: 1265452

Date: 05/16/2016 12:54 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1265452001	SD 001 (Seep 020)	EPA 1664 TPH	DUL/6554		
1265452001	SD 001 (Seep 020)	USGS I-3765	WET/23931		
1265452001	SD 001 (Seep 020)	EPA 300.0	WETA/16716	3	

Face Analytical

## CHAIN-OF-CUSTODY / Analytical Req The Chain-of-Custody is a LEGAL DOCUMENT. All relevan

CLIENT: USS CORP **₹**0#

Due Date: 05/19/16

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Residual Chlorine (Y/N)				 TRPH 1664	TSS,SO4	Other	Methanol	NaOH Na2S2O3	HCI	H2SO4 HNO3	Unpreserved	# OF CONTAINERS	TIME	END	Mm	START DATE TI	SAMPLE TYPE (G=GRAB C=0	MATRIX CODE (see valid codes	경 다음 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등	Drinking Water Waste Water Waste Water Product Soll/Solid Oil Wripe Aur Other Tissue	dre L	SAMPLE ID One Character per box. (A-Z, 0-9/,-) Sample ids must be unique	Sar	ITEM #
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Sinto - weather the				.com,	heather.zika@pacelabs.com,	zika@ı	ather	$  \  $	Pace Project Manager:	ject Ma	Ce Pro	밁				NPDES-TB Wk1	NS I	Н	Project Name:	P	ľ	Fax		Phone:
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### Pace Analytical\*

Document Name:

#### Sample Condition Upon Receipt Form

Document No.: F-VM-C-001-Rev.09 Document Revised: 23Feb2015

Page 1 of 1

Issuing Authority:

Pace Virginia, Minnesota Quality Office

ample Condition Client Name: Upon Receipt			Project #	WO#:1265452
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☐Commercial ☐Pace	Other:			1265452
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acking Material: Bubble Wrap Bubble 6	Bags □No	one 👢	Other:	Temp Blank? Yes No
ermometer Used: 🛛 140792808	Type of	ce: 🔼	Wet [	Blue None Samples on ice, cooling process has begi
Cooler Temp Read °C: Cooler Temp	Corrected of		٠.۲	· ·
mp should be above freezing to 6°C Correction Fa	actor: 10,3	·	Date and	Biological Tissue Frozen? Yes No Kinitials of Person Examining Contents: 5/5/16 cm
· · · · · · · · · · · · · · · · · · ·				Comments:
Chain of Custody Present?	Yes	□No	□n/a	1.
Chain of Custody Filled Out?	<b>[</b> ∠]Yes	□No	□n/a	2.
Chain of Custody Relinquished?	Yes	□No	□n/a	3.
Sampler Name and Signature on COC?	Yes	□No	□n/a	4.
Samples Arrived within Hold Time?	Yes	No	□N/A	5.
Short Hold Time Analysis (<72 hr)?	Yes	No	□N/A	6.
Rush Turn Around Time Requested?	Yes	No	□N/A	7.
Sufficient Volume?	Yes	□No	□N/A	8.
Correct Containers Used?	Yes	□No	□n/a	9.
-Pace Containers Used?	<b>ν</b> € <b>∑</b> Yes	□No	□n/a	
Containers Intact?	[X]Yes	□No	□N/A	10.
Filtered Volume Received for Dissolved Tests?	□Yes	□No	<b></b> N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	¥Yes	□No	□N/A	12.
-Includes Date/Time/ID/Analysis Matrix:	<b>₹</b> ~			
	_			See pH log for results and additional preservation
Alf containers needing acid/base preservation will be checked and documented in the pH logbook.	☐Yes	М́ои	□n/a	documentation
Headspace in Methyl Mercury Container	Yes	□No	<b>⊠</b> N/A	13.
Headspace in VOA Vials (>6mm)?	□Yes	No	M/A	14.
Frip Blank Present?	Yes	□No	<b>₩</b> N/A	15.
Frip Blank Custody Seals Present?	∐Yes	□No	<b>√</b> ŽN/A	
Pace Trip Blank Lot # (if purchased):				
IENT NOTIFICATION/RESOLUTION				Field Date Demoised 3 Type The
·				Field Data Required? Yes No Date/Time:
Person Contacted:  Comments/Resolution:				
Comments/ Resolution:		<u> </u>		

Project Manager Review: Date: 55/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

# Intra-Regional Chain of Custody



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<sup>\*\*\*</sup>In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

## Pace Analytical

Document Name: Sample Condition Upon Receipt Form

Document No.: F-DUL-C-001-Rev.01 Document Revised: 22Jan2016 Page 1 of 1

Issuing Authority: Pace Virginia, Minnesota Quality Office

mple Condition Client Name:		P	roject #:	
pon Receipt				
Courier: Fed Ex UPS Commercial Pace	USPS Other:	J ~~ ₹	ent -{	
cking Number:				— Ontional: Proj. Due Date: Proj. Name:
cody Seal on Cooler/Box Present?	□No	Seals Int	tact? 🗡	Yes No Optional: Proj. Due Date: Proj. Name:
king Material: Bubble Wrap 📐 Bubble	Bags No	ne 🗌	Other:	Temp Blank? ✓ Yes No
mometer Used: 🔀 B00051	Type of 10	e:	Wet 🗌	Blue None Samples on ice, cooling process has begu
Ins C Cooler Tom	p Corrected °C Factor: 十〇・し	· 2	Date and	Biological Tissue Frozen? Yes No Initials of Person Examining Contents:
nain of Custody Present?	Yes	□No	□N/A	1.
nain of Custody Filled Out?	Yes	□No _	□N/A	2.
hain of Custody Relinquished?	Yes	□No	□N/A	3.
ampler Name and Signature on COC?	Yes	□No	DAN/A	4
amples Arrived within Hold Time?	Yes	□No	□N/A	5.
hort Hold Time Analysis (<72 hr)?	Yes	<b>X</b> No	□N/A	6.
ush Turn Around Time Requested?	∐Yes	<b>1</b> 2000	□n/a	7.
ufficient Volume?	∑¥Yes	□No	N/A	8.
orrect Containers Used?	Yes	□No	□N/A	9.
-Pace Containers Used?	Yes	□No	□N/A	
Containers Intact?	Yes	□No	<u>N/</u> A	10.
iltered Volume Received for Dissolved Tests?	Yes	□No	<b>∑</b> n/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	Yes	No	□N/A	12.
-Includes Date/Time/ID/Analysis Matrix:	,			
All containers needing acid/base preservation will be the checked and documented in the pH logbook.		□No	□N/A	See pH log for results and additional preservation documentation
Headspace in Methyl Mercury Container	Yes	∐No	□]N/A	13.
Headspace in VOA Vials ( >6mm)?	Yes	No	□N/A	14.
Trip Blank Present?	∐Yes	□No		15.
Trip Blank Custody Seals Present?	∐Yes	□No	ŪN/A	
Pace Trip Blank Lot # (if purchased):	<del></del>			
LIENT NOTIFICATION/RESOLUTION				Field Data Required? ☐ Yes ☐ No
Person Contacted:				Date/Time:
Comments/Resolution:				
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FECAL WAIVER ON FILE Y N		TEN	MPERATI	JRE WAIVER ON FILE Y N

Date: Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)